

Title (en)

LOW POWER DUAL-SENSITIVITY FG-MOSFET SENSOR FOR A WIRELESS RADIATION DOSIMETER

Title (de)

FG-MOSFET-SENSOR MIT NIEDRIGER LEISTUNG UND DOPPELTER EMPFINDLICHKEIT FÜR EIN DRAHTLOSES STRAHLUNGSDOSIMETER

Title (fr)

CAPTEUR À TRANSISTOR À EFFET DE CHAMP MÉTAL-OXYDE SEMI-CONDUCTEUR À GRILLE FLOTTANTE (FG-MOSFET) À SENSIBILITÉ DOUBLE BASSE PUISSANCE POUR DOSIMÈTRE DE RAYONNEMENT SANS FIL

Publication

EP 4049064 A1 20220831 (EN)

Application

EP 20867118 A 20200916

Priority

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- CA 2020051242 W 20200916

Abstract (en)

[origin: US2021096268A1] Low-power, dual sensitivity thin oxide FG-MOSFET sensors in RF-CMOS technology for a wireless X-ray dosimeter chip, methods for radiation measurement and for charging and discharging the sensors are described. The FG-MOSFET sensor from a 0.13 μm (RF-CMOS process, includes a thin oxide layer having a device region, a source and a drain associated with the device well region, separated by a channel region, a floating gate extending over the channel region, and a floating gate extension extending over the thin oxide layer adjacent to the device well region. In a matched sensor pair for dual sensitivity radiation measurement, the floating gate and the floating gate extension of a FG-MOSFET higher sensitivity sensor are without a salicide layer or a silicide layer formed thereon and the floating gate and the floating gate extension of a FG-MOSFET lower sensitivity sensor have a salicide layer or a silicide layer formed thereon.

IPC 8 full level

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CPC (source: EP US)

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